

Chemical Engineering Thermodynamics MCQ Questions

1. First law of thermodynamics deals with the
 - a. Direction of energy transfer
 - b. Reversible processes only
 - c. Irreversible processes only
 - d. None of these

Ans: A

2. Second law of thermodynamics is concerned with the
 - a. Amount of energy transferred
 - b. Direction of energy transfer
 - c. Irreversible processes only
 - d. Non cyclic processes only

Ans: B

3. Fugacity and pressure are numerically equal, when the gas is
 - a. in standard state
 - b. at high pressure
 - c. at low temperature
 - d. in ideal state

Ans: D

4. Ideal refrigeration cycle is
 - a. same as Carnot cycle
 - b. same as reverse Carnot cycle
 - c. dependent on the refrigerant's properties
 - d. the least efficient of all refrigeration processes

Ans: B

5. Which of the following is a widely used refrigerant in vapour compression refrigeration system (using large centrifugal compressor)?
 - a. freon
 - b. liquid sulphur dioxide
 - c. methyl chloride
 - d. ammonia

Ans: A

6. The most important application of distribution law is in

- a. Evaporation
- b. Liquid extraction
- c. Drying
- d. Distillation

Ans: B

7. Pick out the correct statement.

- a. a real gas on expansion in vacuum gets heated up
- b. an ideal gas on expansion in vacuum gets cooled
- c. an ideal gas on expansion in vacuum gets heated up
- d. a real gas on expansion in vacuum cools down whereas ideal gas remains unaffected

Ans: D

8. After throttling, gas temperature

- a. decreases
- b. increases
- c. remains same
- d. may increase or decrease; depends on the nature of the gas

Ans: A

9. Which one is true for a throttling process?

- a. A gas may have more than one inversion temperature
- b. The inversion temperature is different for different gases
- c. The inversion temperature is same for all gases
- d. The inversion temperature is the temperature at which Joule Thomson Co-efficient is infinity

Ans: B

10. A gas shows deviation from ideal behaviour at

- a. low pressure and high temperature
- b. low pressure and low temperature
- c. low temperature and high pressure
- d. high temperature and high pressure

Ans: C